Cocoon. The larvae turn bluish and enter the ground to pupate, forming a cell lined with silk.

Pupa. Cylindrical, rounded at both ends, long in comparison with its width; uniform shiny black. The wing cases are wrinkled. The cremaster consists of two very short spines, some distance apart, and projecting almost laterally from the last segment, which nevertheless hold to the silken web with considerable firmness.

Length 26 mm.; width 8 mm.

Food plants. Poplar (Populus) and willow (Salix).

Larvae from Yosemite Valley, Cal. Two broods a year, the winter being passed in the pupa state.

TEMPERATURE EXPERIMENTS.

24 Vernon Terrace, Brighton,
10 Sept., 1891.

EDITOR OF PSYCHE, *Dear Sir*: — I have to thank you for the number of Psyche containing an abstract of one of my papers on the temperature experiments I have been making on some Lepidoptera. Will you permit me to point out a typographical error which may be misleading. In "general conclusion" no. 5, the figures "7" and "5" have been transferred, making my figures "57°" read as "75°." I may perhaps add that in order to bring out the *full* deep colouring in the *spring* emergence of illustraria, a somewhat lower temperature than 57° seems necessary, though that 57° is very effective. I find both emergences of all three of the English Selenias affected by temperature in the pupal stage, in colour, — as to markings I am not yet quite sure as regards lunaria and illunaria.

I am very glad you have seen fit to publish the experiments in America. I have always thought a country with such an abundance of Lepidoptera and such extremes of heat and cold would be especially productive of materials for such experimentation. Your distinguished naturalist, Mr. W. H. Edwards, has done much, and indeed I have only endeavoured to follow in his footsteps and work out results that he has not been able to follow out. We want such experiments also on single brooded species, some of which (e. g. *Ennomos autumnaria*) are certainly affected; and as to these it remains to be ascertained whether Prof. Weismann's theory applies (I by no means say it does not). Then the pupal period when the application is effective wants ascertaining. I have reason to think that (as in the Ajax experimented on by Mr. Edwards) the earliest stage is the sensitive one, and this makes it difficult to get in England American pupae in the proper stage. Hoping that some of your readers will take up this very interesting question—which will offer them the compensation for their labours certainly of presenting them with some beautifully coloured and probably not before seen varieties, and thanking you, I beg to remain,

Yours very truly,
F. Merrifield.

CHOICE OF FOOD.—In Psyche for October, page 166, is a note with the above title concerning *Platysamia ceanothi*. The habit mentioned does not appear abnormal when the species is observed in its native country, as many, if not most species in California seem to prefer the tender leaves at the ends of the twigs. This is true, not only of Bombycids, but of many butterflies. It is, probably, due to the fact that the leaves of many of the native trees become quite hard when mature, as for example, the live oak upon which the larvae of *Thecla grunus* feed. These larvae are unable to eat the nearly mature leaves, and starve if not furnished with growing tender ones. The principal food plants of *P. ceanothi* as observed by me in Yosemite were *Ceanothus integerrimus* and *Rhamnus californica*. The leaves of the former are very thin and tender, even when old, and the larvae readily ate them; of the latter, they preferred the young leaves at the ends of new shoots.

Harrison G. Dyar.